

Name: _____ Index No: _____

2306/305

BUILDING ECONOMICS, CONSTRUCTION
LAW, ESTIMATING AND COSTING

Oct./Nov. 2013

Time: 3 hours

Candidate's Signature: _____

Date: _____



THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN QUANTITY SURVEYING

BUILDING ECONOMICS, CONSTRUCTION LAW, ESTIMATING AND COSTING

3 hours

INSTRUCTIONS TO CANDIDATES*Write your name and index number in the spaces provided above.**Sign and write the date of examination in the spaces provided above.**You should have a pocket calculator for this examination.**This paper consists of EIGHT questions in THREE sections; A, B and C.**Answer FIVE questions choosing TWO questions from section A, ONE question from section B and TWO questions from section C.**ALL questions carry equal marks.**Maximum marks for each part of a question are as shown.**Answers to ALL the questions should be written in the spaces provided in this question paper.**Candidates should answer the questions in English.***For Examiner's Use Only**

Section	Question	Maximum Score	Candidate's Score
A	1		
	2		
	3		
B	4		
	5		
	6		
C	7		
	8		
Total Score			

This paper consists of 16 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

SECTION A: BUILDING ECONOMICS

Answer any **TWO** questions from this section.

1. (a) (i) Define the term "supply" as used in building economics.
(ii) Outline **four** factors that affect supply of goods and services in economics. (8 marks)
- (b) Explain **three** situations in which the building industry improves the national economy of a country. (6 marks)
- (c) Highlight **four** factors in which the government controls the construction of buildings. (6 marks)
2. (a) Explain **five** site conditions that affect the cost of construction. (10 marks)
- (b) Briefly explain **four** benefits of cost control to the client. (6 marks)
- (c) Differentiate between fixed and variable factors of production and state **one** example in each case. (4 marks)
3. (a) (i) Explain the concept of "value" and "investment" in landed property.
(ii) State **ten** causes of demand for landed property. (10 marks)
- (b) Outline **four** functions of central bank. (6 marks)
- (c) Highlight **four** effects of inflation in the building industry. (4 marks)

SECTION B: CONSTRUCTION LAW

Answer any **ONE** question from this section.

4. (a) List **four** sources of law in a country. (2 marks)
- (b) (i) Explain the stages of arbitration for construction works.
(ii) State **two** merits and **two** demerits of arbitration over litigation. (11⁺ marks)
- (c) (i) Differentiate between "mortgage" and "charge".
(ii) Outline **three** types of mortgages. (6⁺ marks)



5. (a) Briefly describe the following remedies for a breach of contract:
- (i) damages;
 - (ii) quantum meruit.
- (6 marks)
- (b) Explain privity of contract as a limit of contractual obligation. (2½ marks)
- (c) Outline five characteristics of a lease. (7½ marks)
- (d) Distinguish between libel and slander. (4 marks)

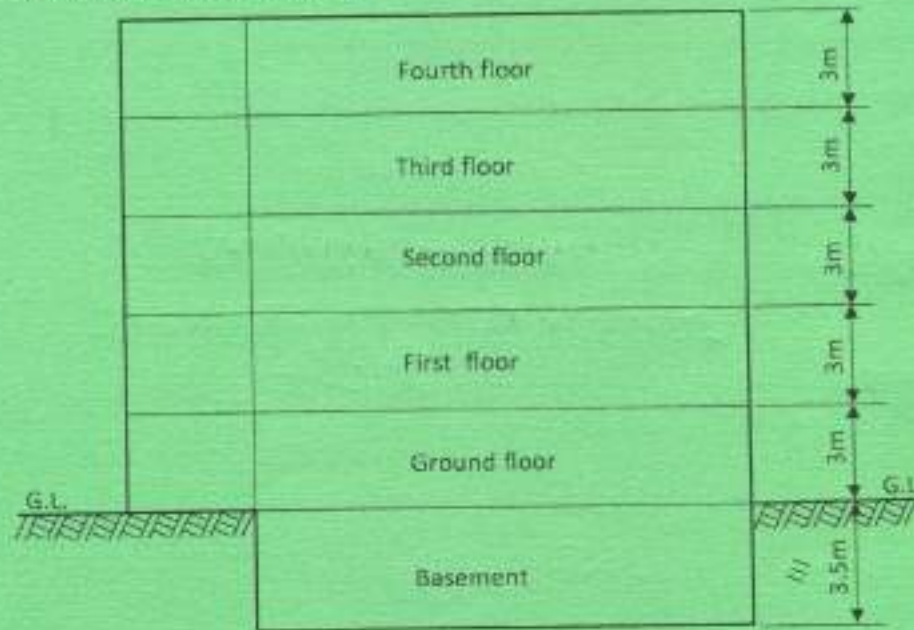


SECTION C: ESTIMATING AND COSTING

Answer any **TWO** questions from this section.

(USE THE DATA GIVEN IN APPENDIX 'A' FOR PRICE BUILD-UP)

6. (a) Figure 1 shows a line diagram of proposed rental apartments. The cost of a similar apartment is ksh 47,000 per square metre. Estimate the cost of the proposed apartments using storey enclosure method. (10 marks)



SECTION Z-Z

Notes:

1. All dimensions are external dimensions
2. All walls are 200mm thick except underground walls which are 250mm thick.



PLAN

Fig.1



- (b) State **eight** factors to consider when costing for a 'crane' to be hired on site. (4 marks)
- (c) Build up a unit rate for the preliminary item "temporary electricity" supply to the site. (6 marks)
7. (a) Build up a unit rate for making and fixing a framed, ledged, braced and battened match boarded door. (per m²) (17 marks)
- (b) Highlight **three** roles of an estimator. (3 marks)
8. (a) The following variation order was issued to the contractor:
- ADD: Vibrated reinforced concrete (1:2:4) in foundation.
- OMIT: Concrete (1:3:6) in foundation (unit rate ksh 9500 per cubic metre).
- Calculate the 'pro-rata' rate for the new item. (13 marks)
- (b) Calculate the cost of owning and operating a 300 litre mixer purchased at ksh 1,200,000. (7 marks)



APPENDIX 'A'

General information

Wages: Skilled labour - 75/- per hr

Unskilled labour - 45/- per hr

Prices given are inclusive of transport to the site

Make reasonable assumptions where necessary.

ELECTRICITY

Project duration - 6 months

Contract sum - 1,500,000

DOOR

Cost of timber per m³ - ksh 21,000

Size of the door - 900 x 2100 mm

CONCRETE

Sand - 1200/= per tonne

Density of sand - 1600 kg/m³

Cement per 50 kg bag - 750/=

Density of cement - 1440 kg/m³

Ballast - 1300/= per tonne

Density of ballast - 1500 kg/m³

Concrete mixer hired at 4000/- per day

Vibrator hired at 2000/- per day

MIXER

Salvage value - 20% of purchase price

Useful life - 10,000 hrs

Interest rate - 15% of purchase price

Repairs and maintenance - 3% of depreciation

Insurance - 10% of purchase price

Cost per litre of diesel - ksh 105/-

Cost per litre of lubricant - ksh 150/-

